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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,805	09/11/2003	Zakar Raffi Hachikian	ITW 0006 IA/41038.9/14350	5226
51635 7590 10/16/2007 DINSMORE & SHOHL LLP ONE DAYTON CENTRE, ONE SOUTH MAIN STREET SUITE 1300 DAYTON, OH 45402-2023			EXAMINER FEELY, MICHAEL J	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 10/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/659,805

Applicant(s)

HACHIKIAN, ZAKAR RAFFI

Examiner

Michael J. Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-23, 25-43 and 45-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45, 46 and 57 is/are allowed.
- 6) ☒ Claim(s) 2, 7, 9, 20, 22, 25, 26, 31, 34 and 47-56 is/are rejected.
- 7) ☒ Claim(s) 3-6, 8, 10-19, 21, 23, 27-30, 32, 33 and 35-43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Pending Claims

Claims 2-23, 25-43, and 45-57 are pending.

Response to Amendment

1. The rejection of claims 1 and 24 under 35 U.S.C. 103(a) as being unpatentable over Helm (US Pat. No. 3,853,812) has been rendered moot by the cancellation of these claims.
2. The rejection of claims 2, 4, 9, 12, 13, 20, 22, 25, 26, 28, 34, 37, and 38 under 35 U.S.C. 103(a) as being unpatentable over Helm (US Pat. No. 3,853,812) has been overcome by amendment.
3. The rejection of claim 44 under 35 U.S.C. 103(a) as being unpatentable over Helm (US Pat. No. 3,853,812) in view of Schuft (US Pat. No. 6,248,204) has been rendered moot by the cancellation of this claim.
4. The rejection of claims 3, 5, 10, 11, 14, 15, 27, 29, 35, 36, 39, and 45-46 under 35 U.S.C. 103(a) as being unpatentable over Helm (US Pat. No. 3,853,812) in view of Schuft (US Pat. No. 6,248,204) has been overcome by amendment.
5. The rejection of claims 47, 48, 51, and 52 under 35 U.S.C. 103(a) as being unpatentable over Helm (US Pat. No. 3,853,812) in view of Cunliffe et al. (US Pat. No. 4,107,142) has been overcome by amendment.

Claim Rejections - 35 USC § 102/103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2, 9, 20, 22, 25, 26, 34, 49, 50, and 53-56 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gordon (US Pat. No. 6,645,341).

Regarding claims 9, 26, 34, 49, 50, and 53-56, Gordon discloses: **(55)** a two-part epoxy adhesive (Abstract) comprising:

a) a resin component comprising a mixture of epoxy resin (column 2, line 40 through column 3, line 13), and an internally flexibilized epoxy resin (column 2, lines 40-43 and 59-64), and

b) a hardener component comprising a mixture by weight of: 20-80% flexibilizer (column 4, lines 61-67); 5-45% unmodified aliphatic amine (column 4, lines 45-60); 0-50% modified aliphatic amine *(0% yields an optional component)*; 0-15% unmodified or modified polyamide *(0% yields an optional component)*; 1-10% accelerator (column 5, lines 1-15); and optionally 5-20% plasticizer/accelerator that acts as both a plasticizer and an accelerator *(optional component)*;

(9 & 34) wherein said resin component is free of nonylphenol and said hardener component is free of nonylphenol *(reference is silent regarding the presence of nonylphenol)*;

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(49 & 53) wherein the flexibilizer is selected from butadiene acrylonitrile flexibilizers (column 4, lines 62-67); (50 & 54) wherein the flexibilizer is selected from amine terminated butadiene acrylonitrile flexibilizers (column 4, lines 62-67);

(56) a process of adhering at least two substrate surfaces to each other (Abstract; column 5, lines 33-57) comprising intercalating between said surfaces an adhesive comprising a reactive mixture of (a) and (b) (Abstract; column 5, lines 33-57); (26) wherein said act of intercalating includes dispensing said resin component and hardener component in equal parts by volume and mixing until the mixture is relatively homogeneous and is applied relatively evenly to the substrates (column 5, lines 33-57).

Gordon fails to explicitly disclose: (55 & 56) wherein said cured adhesive has a tensile elongation at room temperature of greater than 30%. However, it appears that this would have been an inherent property because Gordon satisfies all of the material limitations set forth in the instant claims. It has been found that, "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, the adhesive of Gordon would have inherently satisfied the instantly claimed property limitation of having a tensile elongation at room temperature of greater than 30% because it satisfies all of the chemical/material limitations of the instant claims.

Regarding claims 2, 20, 22, and 25, Gordon fails to explicitly disclose an initial curing time of (2 & 25) less than 3 hours and (20 & 22) about 1.5-2 hours. However, the adhesive of

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Gordon appears to be inherently capable of satisfying these property limitations, given the proper curing conditions, because it satisfies all the chemical/material limitations of the instant invention.

Therefore, the adhesive of Gordon would have been inherently capable of having an initial cure time of less than 3 hours or from 1.5-2 hours, given the proper curing conditions, because it satisfies all the chemical/material limitations of the instant invention.

Furthermore, the adhesive of Gordon would have inherently satisfied the instantly claimed property limitation of having a tensile elongation at room temperature of greater than 120% (or 80%) because it satisfies all of the chemical/material limitations of the instant claims.

Claim Rejections - 35 USC § 103

8. Claims 7 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon (US Pat. No. 6,645,341).

Regarding claims 7 and 31, Gordon discloses: (7 & 31) a hardener component comprising a mixture by weight of: 20-80% flexibilizer (column 4, lines 61-67); *an amine component* (column 4, lines 45-60); 1-10% accelerator (column 5, lines 1-15); and a thixotropic agent (column 5, lines 11-12: *fumed silica*). Gordon fails to explicitly disclose: 5-30% unmodified aliphatic amine; 10-50% modified aliphatic amine; and 0-15% unmodified or modified polyamide.

The *amine component* of Gordon comprises *one or more* amine materials including: unmodified aliphatic amines, modified aliphatic amines, and unmodified or modified polyamides (*see column 4, lines 45-60*). Furthermore, this combination of amine materials constitutes about

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20 to about 100 wt% of the curing agent. In light of these combinations and amounts, it appears that instantly claimed combination (and amounts) would have been obviously envisaged by the skilled artisan.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an amine component comprising: 5-30% unmodified aliphatic amine, 10-50% modified aliphatic amine, and 0-15% unmodified or modified polyamide, in the curative component of Gordon because Gordon discloses an *amine component* comprising *one or more* amine materials including: unmodified aliphatic amines, modified aliphatic amines, and unmodified or modified polyamides. Furthermore, this combination of amine materials constitutes about 20 to about 100 wt% of the curing agent.

Gordon also fails to explicitly disclose the amount of thixotropic agent. However, one of ordinary skill in the art would have recognized this amount as a result effective variable, wherein an effective amount is required to impart thixotropy.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed amount of thixotropic agent in the composition of Gordon

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because one of ordinary skill in the art would have recognized this amount as a result effective variable. Such an amount would have been obviously optimized to impart thixotropy.

9. Claims 47, 48, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon (US Pat. No. 6,645,341) in view of Cunliffe et al. (US Pat. No. 4,107,142).

Regarding claims 47, 48, 51, and 52, Gordon discloses the use of epoxy functional butadiene copolymers; however, the fail to explicitly disclose the use of **(47 & 51)** wherein the internally flexibilized epoxy resin is selected from internally flexibilized bisphenol A type epoxy resins and internally flexibilized bisphenol F type epoxy resins; and **(48 & 52)** wherein the internally flexibilized is a butylated bisphenol A epoxy resin.

Cunliffe et al. disclose epoxide materials suitable for use in flexible adhesives that are prepared by reacting a diene, such as butadiene or isoprene, with a diepoxide, such as DGBA (bisphenol A epoxy). They further disclose, "These products may be cured with conventional epoxide curing agents to give an internally flexibilized adhesive having useful combinations of tensile and shear strengths," (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a butylated bisphenol A epoxy resin, as taught by Cunliffe et al., in the epoxy blend of Gordon because Cunliffe et al. disclose that these materials are suitable for use in flexible adhesives and are cured with conventional epoxide curing agents to give an internally flexibilized adhesive having useful combinations of tensile and shear strengths.

Response to Arguments

10. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

11. Claims 45, 46, and 57 are allowed.

12. Claims 3-6, 8, 10-19, 21, 23, 27-30, 32, 33, and 35-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 3-6, 10-19, 21, 23, 27-30, 33, and 35-43, Gordon represents the closest prior art; however, he fails to teach or suggest the use of both "an accelerator" and "a plasticizer/accelerator" wherein the plasticizer/accelerator acts as both a plasticizer and an accelerator. They use a phenolic accelerator (*see column 5, lines 1-5*); however, the methyl chains in this phenol accelerator appear to lack proper chain length to impart a plasticizing effect.

Regarding claims 8 and 32, Gordon represent the closest prior art; however, they fail to teach or suggest this specific combination of amine materials in the hardener component.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely
Primary Examiner
Art Unit 1796

October 12, 2007

MICHAEL FEELY
PRIMARY EXAMINER